

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A process for reducing solids containing iron oxide, in particular iron ore, in which fine-grained solids are heated and at least partly calcined in a preheating and/or calcining stage (2, 9), are prerduced in a first fluidized-bed reactor (14) downstream of the preheating and/or calcining stage (2, 9), and are reduced in a second fluidized-bed reactor (16) and briquetted in a briquetting stage (20) downstream of the second reactor (16) at a temperature above 500°C, ~~characterized in that wherein~~ magnesite together with the solids containing iron oxide is added to the preheating and/or calcining stage (2, 9), which magnesite is at least partly calcined in the preheating and/or calcining stage (2, 9) to obtain magnesium oxide.

2. (Currently Amended) The process as claimed in claim 1, ~~characterized in that wherein~~ the magnesite together with the solids containing iron oxide is calcined in the preheating and/or calcining stage (2, 9) at temperatures of 400 to 1250°C, in particular at 540 to 1000°C.

3. (Currently Amended) The process as claimed in claim 1 or 2, ~~characterized in that wherein~~ more than 50 %, in particular about 90 %, of the magnesite added to the preheating and/or calcining stage (2, 9) together with the solids containing iron oxide has a grain size between 300 pm and 3 mm, in particular between 400 pm and 1 mm.

4. (Currently Amended) The process as claimed in ~~any of the preceding claims, characterized in that claim 1, wherein~~ between 0.1 and 5 wt-%, in particular about 0.5 wt-% of magnesite are added to the solids containing iron oxide before and/or during the supply into the preheating and/or calcining stage (2, 9).

5. (Currently Amended) The process as claimed in ~~any of the preceding claims, characterized in that claim 1, wherein~~ the solids supplied to the briquetting stage (20) from the second reactor (16) contain between 0.1 and 5 wt-%, in particular about 0.5 wt-%, of magnesium oxide.

6. (Currently Amended) The process as claimed in ~~any of the preceding claims, characterized in that claim 1, wherein~~ in a heating stage (18)

upstream of the briquetting stage (20) the solids reduced in the second reactor (16) together with the magnesium oxide are heated to a temperature above 600°C, in particular about 700°C, and are introduced into the briquetting stage (20) in the hot condition.

7. (Currently Amended) The process as claimed in ~~any of the preceding claims, characterized in that claim 1, wherein~~ the solids containing iron oxide are reduced in the first and second reactors (14, 16) at temperatures below 700°C, in particular at about 630°C, to obtain metallic iron with a degree of metallization of more than 75 %, in particular more than 90 %.

8. (Currently Amended) Use of magnesite as flux material which in a process for producing sponge iron briquets, in particular as claimed in ~~any of the preceding claims claim 1,~~ is charged together with solids containing iron oxide, in order to increase the flowability of hot sponge iron during the supply from a reduction stage into a briquetting stage.

9. (Currently Amended) A plant for reducing solids containing iron oxide, in particular for performing a process as claimed in ~~any of claims 1 to 7, claim 1,~~ comprising a preheating and/or calcining stage (2, 9), a first and a second reactor (14, 16) each constituting a fluidized-bed reactor, and a briquetting stage (20), ~~characterized in that wherein~~ the preheating and/or calcining stage (2, 9) includes means (1) for the simultaneous continuous or discontinuous introduction of iron-oxide-containing solids and magnesite, and that upstream of the briquetting stage (20) a heating stage (18) is provided.

10. (Currently Amended) The plant as claimed in claim 9, ~~characterized in that wherein~~ at least one of the two reactors (14, 16) is a fluidized-bed reactor with a circulating fluidized bed and/or an annular fluidized bed.

11. (Currently Amended) The plant as claimed in claim 10, ~~characterized in that wherein~~ the first and second reactors (14, 16) have a plurality of nozzles or inlet openings for supplying a heated gaseous reducing agent such as hydrogen.

12. (Currently Amended) The plant as claimed in ~~any of claims 9 to 11, characterized in that claim 9, wherein~~ the preheating and/or calcining stage (2, 9) includes a first Venturi preheater (2) with a downstream first cyclone (4) and a second preheater (9) with a downstream second cyclone (11), the first and/or the

second cyclone (4, 11) being connected with the first Venturi preheater (2) via conduit (5, 7) for recirculating dust separated from waste gas.